

Larva and pupa of *Pyanisia tristis* from Alabama
(Coleoptera: Tenebrionidae)

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The genus *Pyanisia* Laporte, the only New World member of the Amarygmmini, contains nine species. All are found in Latin America, but two species, *tristis* (Laporte) and *opaca* (Solier), also extend into the Gulf Coast area of the southeastern United States. Nothing has been published on the immature stages of *Pyanisia* and only very little on their habits; Champion (1887:329) said the species of *Pyanisia* are found beneath loose bark or about fungoid growths on decaying trees, often in gloomy places in the forests, and Wickham (1898:83) found *tristis* under logs in the woods.

The immature stages of one species, *Pyanisia tristis*, can now be described. The specimens, 3 adults, 1 pupa, and 4 larvae, were collected at Brookley Field Air Base, Mobile, Alabama, June 23, 1967, by R. C. Goff and W. T. Seibels, in decayed lumber. The boards, mostly pine, were wrapped in bundles of six and metal tapes were around each bundle; most of the wood was infested with termites, fungus gnats, and *Pyanisia tristis*. The beetle larvae were tunneling across the grain in the heart of the lumber, and their galleries were filled with sawdust. Neither the origin of the lumber nor the time or place of infestation of the beetles could be determined.

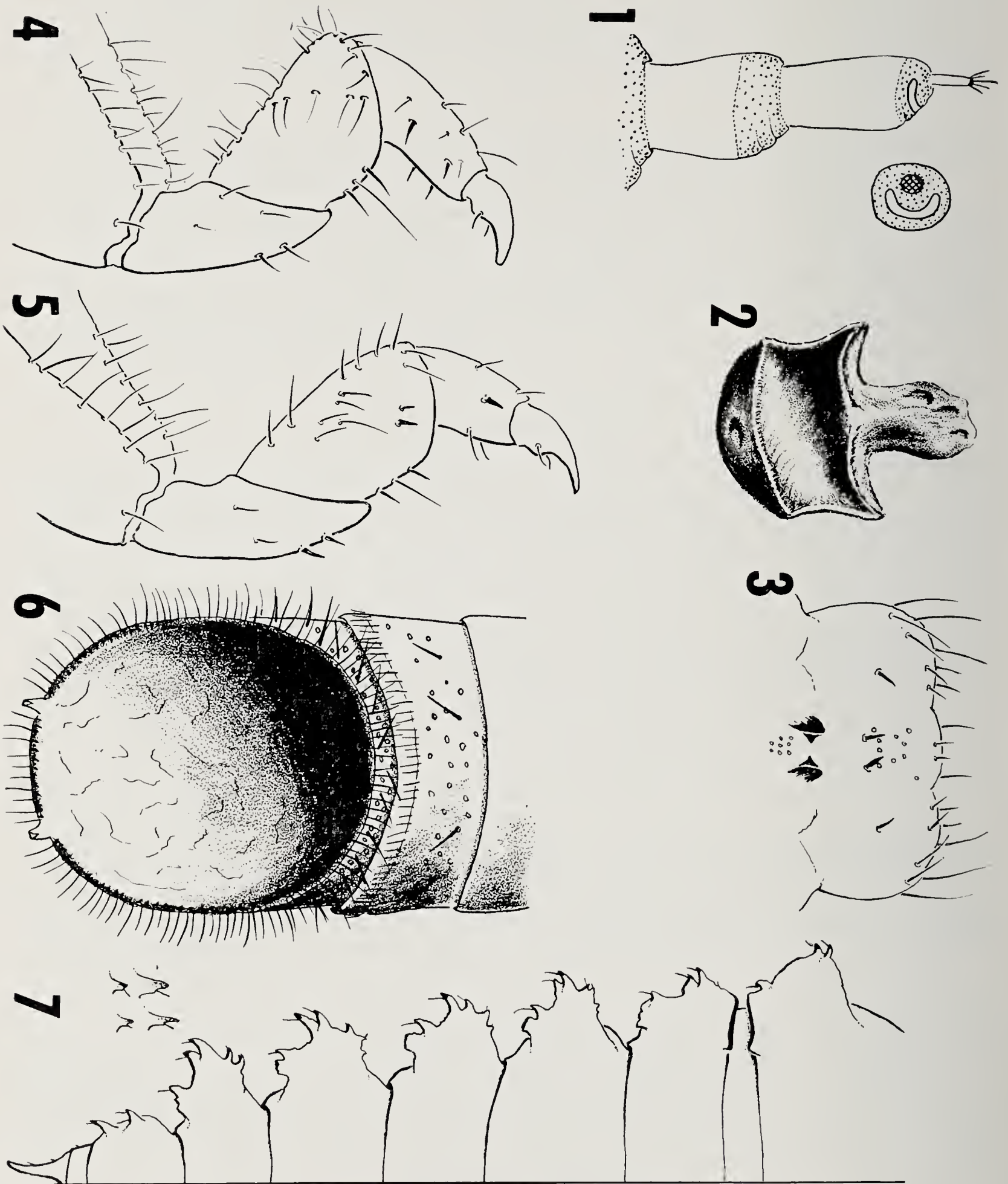
LARVA

Body elongate, cylindrical, wireworm-like; length, 3 specimens approximately 28 mm., 1 specimen very short because of abnormalities; surface shiny, moderately sclerotized and white except mandibles black and last two abdominal segments light yellow-brown; with a few long, slender setae on most body areas.

Head. Subglobular, surface smooth, without obvious punctures, setae few on frons, numerous epistoma and lateral and posterior areas of capsule, most setae short; head capsule 2.7-3.3 mm. wide. Clypeus smooth, impunctate, with 4 long setae; clypeal condylus strongly produced. Labrum smooth, with minute punctures, length subequal to length of clypeus; with transverse row of 6 widely spaced slender setae. Labrum with buccal surface (fig. 3) not having sensilla lateral to medial anterior setae; anterior sensillae in two rows; with 4 subanterior sensillae; with pair of unisetiferous sensillae, their setae coarse; without longitudinal row of setae lateral to unisetiferous sensillae; with triangular tormae;

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Figures 1-7.—*Pyanisia tristis*, 1-6 larva, 7 pupa. 1—Antenna and dorsal view of membranous part of second segment showing sensorium. 2—Hypopharyngeal sclerome of labium. 3—Labrum, buccal surface. 4—Prothoracic leg, posterior view. 5—Metathoracic leg, posterior view. 6—Apex of abdomen, dorsal view. 7—Abdomen of pupa, dorsal view, with a few small setiferous acute spines (inset).

with 8 posterior sensillae. Mandibles with apex tridentate; molar area of right mandible with 2 weak, irregular carinae. Maxilla with mala broad, parallel-sided, and truncate; palpus with segments short and stout. Labium with ligula pronounced, arcuate, buccal surface with 2 coarse setae and 2 papillae; then more posteriorly and laterally with pair of long coarse setae; hypopharyngeal sclerome (fig. 2) heavily sclerotized, projecting, with lateral borders incurved, posterior border carinate and excurved, surface very strongly concave, anterior border bisinuate and with narrow finger-like process. Antenna (fig. 1) with segment 2 relatively short; apex of 2 with narrow C-shaped white area, the sensorium.

Body. Terga with small, mostly transverse wrinkles. (In the following, 1st, 2nd, etc., refer to abdominal segments.) Thoracic and 1st through 7th without punctures. Prothoracic with anterior border having approximately 20 long and short slender setae, with posterior border having 6 to 8 long and short slender setae. Mesothoracic, metathoracic, and 1st through 7th with 6 to 8 short and long slender setae on both anterior and posterior border. Mesothoracic, metathoracic, and 1st through 8th with very vague longitudinal line on one specimen but with line invisible on others. Spiracles of 1st large, longer than wide, those of 2nd through 8th smaller, about 0.7 size of 1st, becoming progressively more circular on posterior segments. 8th segment one-half length of 7th; with numerous small cribriform punctures on dorsal area of tergum; setae on anterior border as on previous segments but on posterior border much more numerous. Ninth segment (fig. 6) dorsally with deep concavity which is slightly longer than broad, border of concavity with very dense, very short setae causing a fuzzy appearance, with fewer long slender setae, and posteriorly with 2 sharp recurved hooks; surface of concavity smooth, with minute setae of moderate density; surface anterior to concavity with dense cribriform punctures, many with an erect slender seta; punctures on lateral and ventral surfaces less dense than those on dorsal surface, becoming sparser as distance from border of concavity increases. Anal papillae small, projecting, short.

Legs (figs. 4, 5). Sparsely setose, not modified for digging; prothoracic only slightly stouter than others. Coxae with long, slender setae on anterior and posterior dorsal borders. Protrochanter with 2 slender short setae on ventral surface. Profemure with 2 moderately long and 1 long slender setae on ventral surface and numerous slender setae on posterior and dorsal surfaces. Protibiotarsus with 1 coarse and 2 slender setae on ventral surface, and 3 short coarse and 2 short slender setae on distal half of posterior surface, and 4 slender setae on dorsal surface. Meso- and metatrochanters with 2 short coarse setae on each ventral surface. Meso- and metafemora with 2 short coarse and 1 long slender setae on each ventral surface; and 2 short coarse and numerous long slender setae on posterior surface and numerous long slender setae on dorsal surface. Meso- and metatibiotarsus with 2 slender setae on ventral surface; 1 short coarse seta on posterior surface and 2 slender setae on dorsal surface.

PUPA

Body without obvious setae, though posterior segments with a few minute setae. Pronotum similar in shape to adult pronotum; posterior border bisinuate; lateral border with approximately 12 short acute spines of various sizes; anterior one-fourth of dorsal surface with approximately 10 such spines; all spines with slightly darker apex and subapical seta (fig. 7, inset). Abdomen (fig. 7) with terga broad, with lateral processes which project laterally on 1st and 2nd terga and dorsolaterally on 3rd through 7th (all processes are shown projecting laterally in my illustration). Paired gin traps formed by posterior border of 1st tergum and anterior border of 2nd tergum; anterior and posterior components of gin trap similar; short, broad, nearly truncate lobe with heavily sclerotized edge. 1st lateral process broadly projecting, with 2 small anterior and 1 small posterior tubercles. 2nd through 7th lateral processes broadly projecting, each with 2 large anterior and 1 large posterior tubercles and varying numbers of small or minute tubercles which are more numerous anteriorly, with broad irregular process posteriorly; borders of lateral processes thus variable and irregular. Lateral process of 7th tergum consisting only of 2 large acute tubercles. All tubercles of lateral processes with short subapical seta. 9th segment with pair of long, acute, diverging urogomphi, each with few, very short setae.

The previously recorded distribution of *Pyanisia tristis* is United States, Mexico, British Honduras, Guatemala, Nicaragua, Panama, Cuba, Isle of Pines, and Puerto Rico (Blackwelder 1945:543). I have found only three literature records of *tristis* in the United States, Brownsville, Texas (Wickham 1898:83; Linell 1899:183) and simply Texas (Leng 1920:237). In addition to the Alabama specimens described above I know of specimens from Brownsville, Texas, New Orleans, Louisiana, and Miami Beach and Biscayne Bay, Florida in the U. S. National Museum and American Museum of Natural History.³

Our other species, *opaca* (Solier), has been recorded from the United States and Mexico. It has been recorded from Texas (Horn 1876:252), from southern Florida and Texas (Schwarz 1878:462), from the United States (Henshaw 1885:-122; Linell 1899:183) and from Florida, Louisiana, and Texas (Leng 1920:237). However, I have not been able to locate any United States specimens of *opaca*, although a specimen of *tristis* from Biscayne Bay, Florida, in the American Museum of Natural History had been misidentified and labeled as *opaca*.

Curators might want to check their collections for United States specimens of these two species. The difference between the adults is obvious: the base of the pronotum is bisinuate in *tristis* and arcuate in *opaca*.

The immature stages of several members of the tenebrionid tribe Amarygmini have recently been described and illustrated: larva of *Plesiophthalmus nigrocyaneus* Motschulsky from Japan by Fukuda, Kurosa, and Hayashi (1959:-485, figs.), by Hayashi (1966:27, 34, figs.), and by Hayashi (1968:11, fig.), larva of *Plesiophthalmus spectabilis* Harold from Japan by Hayashi (1968:10, figs.); larva of *Elixota curva* Marseul from Japan by Hayashi (1966:28, 34, figs.); larva and pupa of *Amarygmus morio* (Fabricius) from Hawaii and many other Pacific

³Recently specimens were found at Houston, Tex. in rotten oak timbers in a dry dock yard.

islands by Spilman (1966:297, figs.) All Amarygmini larvae have a strongly concave ninth abdominal segment, a very distinctive characteristic.

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A New Periodical

Volume 1, No. 1 of *Cicindela*, a quarterly devoted to the Cicindelidae, appeared in March 1969 under the senior editorship of Ronald H. Huber, 11921 Champlin Road, Osseo, Minn., 55369. The subscription rate is \$3.50 a year and should be sent to Huber at the above address. The other two members of the editorial staff are R. C. Graves of Bowling Green University, Ohio and H. L. Willis of Wisconsin State University, Platteville.

The stated aim of the journal is to stimulate the exchange of ideas, literature, and specimens related to the Cicindelidae of the world hoping thus to advance the knowledge of the family. The editor notes that this journal is an experiment and to quote him "an inquiry into the merits (and shortcomings?) of extreme specialization—held in the optimistic perspective that sharing such a common interest will enhance cooperation and good fellowship between all members of the entomological community."

The first number contained a long article on the coastal tiger beetles of Texas, a short article on an unusual antennal formation, a long article on nomenclature, and several short research notices. The second issue contains notes on the tiger beetles of Chili, several articles on the collecting of tiger beetles, a continuation of the article on nomenclature from the first issue, and several short notes.

The journal is attractively put out with both the plates and text well done. The first two issues ran between 22 and 24 pages. The writer enjoyed both issues and found them to be informative. Time will tell whether there is a need or a place for such a journal as this.

N. M. D.